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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,404	10/01/2003	Gary L. Gibson	02716.0003.NPUS01	8884
27194	7590	11/14/2005	EXAMINER	
HOWREY LLP C/O IP DOCKETING DEPARTMENT 2941 FAIRVIEW PARK DRIVE, SUITE 200 FALLS CHURCH, VA 22042-2924			DRODGE, JOSEPH W	
			ART UNIT	PAPER NUMBER
			1723	

DATE MAILED: 11/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/677,404

Applicant(s)

GIBSON ET AL.

Examiner

Joseph W. Drodge

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>0404,0504</u> .   | 6) <input type="checkbox"/> Other: ____.                                    |

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A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 1-30 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-29 and 40 of copending Application No. 10/830,935. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palm et al patent 6,524,489 (Palm) in view of Kirkland et al patent 6,482,324 (Kirkland), Nau et al patent 6,071,410 (Nau) and the Buszewski et al publication (Buszewski).

For claims 1-29, Palm discloses a method of use of a silica filter media having surface active groups reacted with one or more silanes (Abstract, column 4, lines 25-39, column 5, lines 1-11, column 11, lines 42-44, column 16, lines 19-30, etc.), the media being used in filtration of impurities (column 12, lines 26-30, etc.) in combination with use of the media for chromatographic separations of sample analytes (column 16, lines 40-54 and 45-53), and simultaneous binding of components of interest to the media (column 17, lines 53-58).

For process claims 14 and 15 and the composition claim 30, the media comprises rice hull ash (column 11, lines 41-43) and for process claims 16-29 as well as the composition claims also comprises silanes (column 16 starting with line 48 and column 17 starting with line 41, including lines 53-58). The composition claims 30

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differs in that Palm does not disclose any of the recited particular silane species. However, Kirkland teaches a chromatographic media with various of the claimed species (Table III in column 9), as does Nau (column 7, line 59-column 8, line 29) and Buszewski sections 2.3, 2.4 and 2.5). It would have been obvious to one of ordinary skill in the art to have altered the composition of Palm by selecting one or more of the particular species of instant claim 30, since Kirkland, Nau and Buszewski teach to use varied specific ones of the claimed particular silanes to chromatographically separate or selectively separate specific analytes and substances.

For process claims 1-29, the claims all differ from Palm in requiring a step of eluting the bound component of interest from the silica filter media, while independent claims 2 and 29 (and claims dependent therefrom) additionally differ in requiring selective binding of components of interest with at least one component not being bound and collected & recovered with a downstream stream. However, Buszewski teaches selective capture of components, with other components flowing through chromatographic systems and respective elution and capture of both bound and unbound components (see Details of Introduction on page 268, and last portion of section 2.4 on page 271, etc. Nau teaches desorbing of solute (i.e. eluting) and collecting of solute (Abstract, and text beginning at column 10, lines 21-36). Kirkland teaches selective separations and sorbing in column 10, lines 14-63).

It would also have been obvious to one of ordinary skill in the art to have modified the Palm process by eluting and collecting bound and/or unbound components of interest or selectively binding and eluting one of a plurality of components of interest,

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since Buszewski, Nau and Kirkland teach such selective binding, eluting and collecting to better characterize and analyze complex chemical and biological mixtures.

Regarding claim 3, further separations and purifying of components of interest is taught in Nau at column 11, lines 43-53.

Regarding claims 6-8, treatment of bacteria and particulates is taught in Palm at column 17, lines 53-58.

For claim 9, mixing the media with the sample is suggested at column 17, lines 8-13 of Palm.

For claims 10-12, Palm discloses pre-treatment of the silica substrate at column 15, line 23-column 16, line 17.

For claims 13 and 14, Palm discloses macroporous silica substrate starting at column 11, line 54.

For claims 16-28 and 30, a wide range of silane functional moieties and plural moieties are taught in Buszewski particularly in sections 2.3 through 2.5, in Kirkland at column 4, lines 17-22 and column 8, lines 48-54 and in Nau at column 7, line 59-column 8, line 30.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jiang et al PGPUBS Publication US 2002/0070168; Rogers et al patent 5,888,397 are of further interest for use of filtering and chromatographic media comprising silica substrates having surface modified silane groups.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Drodge at telephone number 571-272-1140. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can be reached at 571-272-1151. The fax phone number for the examining group where this application is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or Public PAIR, and through Private PAIR only for unpublished applications. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JWD

November 9, 2005

  
JOSEPH DRODGE  
PRIMARY EXAMINER